

REMARKS

Claims 11-27 are pending in this application. By this Response, Applicants propose rewriting dependent claim 19 in independent form to place this claim and its dependent claims in condition for allowance. Claims 26 and 27 are also added. Support for the new claims can be found in the originally-filed specification (e.g., page 12, lines 12-22, and page 13, lines 18-23).

As an initial matter, Applicants respectfully note that the final Office Action lacks a clear indication of the status of claims 19-21. Specifically, although claims 19-21 were indicated as being rejected in the Office Action Summary, those claims were not subject to any rejection in the final Office Action. Thus, Applicants presume that claims 19-21 contain allowable subject matter. In light of that presumption, as mentioned above, Applicants propose rewriting dependent claim 19 in independent form to place that claim and its dependent claims in condition for allowance. If, however, the Examiner intended a rejection of those claims, Applicants respectfully request that the Examiner set forth a detailed explanation of the basis for that rejection and make any subsequent Office Action non-final to provide Applicants with a full and fair opportunity to respond.

In the final Office Action, claims 11-18 and 22-25 was rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,692,272 to Lemke et al. ("Lemke") in view of Japanese Application Publication No. 2002-334748 ("JP '748"). Applicants respectfully traverse this rejection.

Independent claim 11 recites an electrical connector comprising "a terminal set essentially consisting of a plus signal terminal, a minus signal terminal, a first ground terminal, and second ground terminal" and "a connector housing accommodating the terminal set." Each of the terminals includes "an electrical contact portion configured to

electrically connect to a respective terminal of another electrical connector ... wherein substantially entire portion of the terminals including the electrical contact portions are disposed inside the connector housing."

Lemke discloses an electrical connector 100 for connecting between two electrical devices 110, 112. As shown in Fig. 1, the connector 100 includes a first section 101 electrically connected to the first electrical device 110 and a second section 102 electrically connected to a second electrical device 112. The first section 101 comprises a plurality of modules 105, each module comprising a column of conductors 130 secured in a frame 150. As best shown in Fig. 2, each conductor 130 has a connection pin 132 extending from the frame 150 for connection to the first electrical device 110, a blade 136 extending from the frame 150 for connection to the second section 102 of the second electrical device 112.

JP '748 discloses a receptacle connector 1 comprising: a plurality of signal contacts S; a plurality of ground contacts G; a plurality of general contact D; an insulator 2 for holding the signal contacts S, ground contacts G, and general contacts D; and a receptacle shell 3 enveloping the insulator 2 and the contacts S, G, D.

As is apparent, Lemke does not disclose or otherwise suggest, among other things, "a connector housing accommodating the terminal set ... wherein substantially entire portion of the terminals including the electrical contact portions are disposed inside the connector housing," as recited in independent claim 11. Instead, the blades 136 of Lemke, which connect to the second section 102 of the second electrical device 112, are extended from the frame 150, rather than being disposed inside therein.

While admitting this deficiency of Lemke (e.g., the Examiner admits that Lemke "does not disclose an outer connector housing with the terminals connected to cable wires and being located entirely inside the housing"), the Examiner asserts that JP '748 "discloses (Figures 3 and 10) an outer connector housing (shield) with the terminals connected to cable wires and being located entirely inside the housing" and that "it would have been obvious to provide Lemke et al with an outer connector housing, the terminals being connected to cable wires and being located entirely inside the housing, as taught by JP '748, to facilitate connection between a shielded cable and a substrate." As explained below, the Examiner's asserted combination of Lemke and JP '748 fails to establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a).

The Examiner has the initial burden of presenting a *prima facie* case of unpatentability. To establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a), three basic criteria must be met. First, the prior art references when combined must teach or suggest all the claim elements. Second, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Finally, there must be a reasonable expectation of success. See M.P.E.P. § 2143. Furthermore, case law in this context indicates that the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and that the evidence of a teaching, suggestion, or motivation to combine must be "clear and particular." Applicants also submit that the mere fact that references can be combined or modified does not render the resultant

combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990).

In this case, regarding the second criterion, in particular, there is no suggestion or motivation in either Lemke or JP '748 to combine or modify the asserted teachings of the references in the manner proposed by the Examiner. The Examiner merely asserts that, since JP '748's connector discloses a receptacle shell 3 enveloping the insulator 2 and the contacts S, G, D, it would have been obvious to provide such a receptacle shell to Lemke's connector "to facilitate connection between a shielded cable and a substrate." The Examiner's asserted motivation (i.e., "to facilitate connection between a shielded cable and a substrate"), however, is merely a conclusory statement and, therefore, does not provide any sufficient reasoning as to why "facilitating connection" would have been desired by one of ordinary skill in the art considering Lemke's connector. That is, while the Examiner appears to assert that the receptacle shell 3 of JP '748 somehow facilitates electrical connection, there is no clear and particular reason supplied by either Lemke or JP '748, which would have motivated one of ordinary skill in the art to modify the design of JP '748's connector in the manner suggested by the Examiner.

Moreover, contrary to the Examiner's assertion, even if Lemke's connector were somehow modified to include the receptacle shell 3 of JP '748, the modified connector would not facilitate connection any better than Lemke's present design because, among other reasons, the operational characteristic of Lemke's connector is distinctly different from that of JP '748's connector. For example, unlike JP '748's connector, Lemke's connector is a right angle electrical connector with a first section 101 fixedly connected

to the first electrical device 110 and a second section 102 fixedly connected to the second electrical device 112. To connect between the first and second electrical devices 110, 112, the conductors 130 of the first section 101 are turned 90° about a pivot axis. That is, Lemke's connector rotates in a predetermined path for connection between the first section 102 and the second section 102 and, thus, there is no need for having a guiding structure such as the receptacle shell 3 of JP '748.

In addition, the conductors 130 in Lemke's connector are arranged in a plurality of modules 105. For example, as shown in Fig. 2, the connector has six modules 105, and each module 105 contains a column of six conductors 130 secured in a frame 150. As the name "module" plainly suggests, these modules 105 require to be individually removable from the connector. Therefore, if Lemke's connector were modified to include the receptacle shell 3 of JP '748 to envelope the entire structure of Lemke's connector, the modules 105 would not be individually removable, thereby destroying the intended teachings of Lemke.

As is abundantly clear, the Examiner's asserted motivation is a result of impermissible hindsight gleaned from the present application that discloses novel and non-obvious subject matter of, for example, an electrical connector enabling high speed signal transmission. When the references are viewed without such hindsight, one of ordinary skill in the art considering Lemke' connector would not have been motivated to combine the teachings of JP '748 in the manner proposed by the Examiner since there is no "clear and particular" reason to do so.

For at least these reasons set forth above, Applicants respectfully submit that a *prima facie* case of obviousness under 35 U.S.C. § 103(a) has not been properly

established. Thus, independent claim 11 and its dependent claims define novel and non-obvious subject matter over the asserted combination of Lemke and JP '748, and reconsideration and withdrawal of this rejection under 35 U.S.C. § 103(a) is respectfully requested.

Claim 9 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Lemke in view of JP '748, and further in view of U.S. Patent No. 6,736,676 to Zhang et al. Applicants respectfully note that this rejection was made in error since claim 9 is no longer pending in this application. Thus, reconsideration and withdrawal of this rejection is respectfully requested.

Applicants respectfully request the reconsideration of this application, the withdrawal of all the outstanding rejections, and the allowance of all pending claims 11-27.

Applicants submit that the proposed amendment to claim 19 under 37 C.F.R. § 1.116 does not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner, since all of the elements and their relationships were previously claimed.

The final Office Action contains a number of statements and characterizations regarding the claims and the related art. Applicants decline to necessarily subscribe to any statement or characterization in the final Office Action, regardless of whether it is addressed above.

The Examiner is invited to call the undersigned (571-203-2735) if a telephone conversation might advance prosecution of the application.

Please grant any extensions of time required to enter this response and charge
any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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Dated: October 7, 2005

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